

SHORT COMMUNICATIONS

***Tephrosia bidwillii* (Fabaceae: Millettieae) does not occur in Western Australia**

Tephrosia bidwillii Benth. (Fabaceae: Millettieae) is currently listed on the *Census of Western Australian Plants* with a Priority Three conservation status, with a number of specimens from the Pilbara bioregion identified as this species. Examination of *T. bidwillii* type material on loan from the Royal Botanic Gardens, Kew (K), as well as specimens of this species at the Queensland Herbarium (BRI) and the National Herbarium of New South Wales (NSW), has clarified that the Western Australian Herbarium (PERTH) does not hold any specimens of *T. bidwillii* and that this species does not occur in Western Australia.

Much of the taxonomic confusion surrounding *Tephrosia bidwillii* in Western Australia stems from the description by Bentham (1864) of *T. bidwillii* var. (?) *densa* Benth. from a single specimen, 'N. Australia. Hills near Nichol [Nickol] Bay, *F. Gregory's Expedition*'. Nichol Bay is in the Pilbara bioregion of Western Australia. Bentham's diagnostic description of this taxon was very brief: 'Leaflets shorter and more silky; inflorescence dense, but with the calyx of *T. [b]idwillii*.' After studying the *Tephrosia* Pers. collection at K in the early 1970s, Les Pedley (BRI) concluded that *T. bidwillii* var. *densa* should be recognised as a distinct species. He annotated numerous PERTH specimens as *T. densa* (Benth.) Pedley ms in 1984, but never formally made the combination. The name *T. densa* ms has been taken up by the Western Australian botanical community and is in common use, although in the absence of a full taxonomic description and discussion of affinities this name has not been confidently applied. In the past 25 years, many specimens with longer inflorescences and longer, more widely spaced and less hairy leaflets than the specimens annotated as *T. densa* ms by Pedley have been identified as *T. bidwillii*.

Tephrosia bidwillii is similar to *T. densa* ms in having 7–15 leaflets per pinnate leaf, orange flowers and patent, stramineous to rufous hairs on the calyx, but can be readily distinguished by the following combination of characters: lanceolate to very narrowly elliptic leaflets with obviously brochidodromous secondary venation and prominent, semi-reticulating intersecondary veins; large, lanceolate, leaf-like, three-veined stipules; openly-spaced fascicles of flowers positioned in the upper half to third of the inflorescence axis; large flowers (10–17 mm long); elongate central lower calyx lobe (*c.* 1/4–1/3 × longer than the lateral lower calyx lobes); and fruit (25–)40–55 mm long and *c.* 5 mm wide with short, sparse, appressed hairs and a long, distinctly down-curved beak. Confirmed specimens of *T. bidwillii* are only known from the Burnett, Darling Downs and Moreton districts of Queensland and from northern New South Wales.

The probable holotype of *Tephrosia bidwillii* var. *densa* has also been viewed (on loan from K) and I concur with Pedley that this taxon should be recognised at specific rank. The circumscription of *T. densa* ms is still under taxonomic investigation, however, as there is considerable variation in the

size and spacing of leaflets, the length of inflorescences and the density, distribution, orientation and hue of indumentum observable among PERTH specimens.

References

Bentham, G. (1864). *Flora Australiensis*. Vol. 2, pp. 202–211. (Reeve & Co.: London.)

Ryonen Butcher

Western Australian Herbarium, Department of Environment and Conservation,
Locked Bag 104, Bentley Delivery Centre, Western Australia 6983